# Measuring Racial Disparities in Foster Care Placement:
# A case study of Texas

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Abstract

Black children are placed in foster care at a higher rate than children of other races. Despite a large literature, there is no consensus view on the causes of racial disparities in foster care placements. The prevalence of cultural competence training in child welfare services provides evidence that decision-makers in child welfare investigations might not accurately interpret the information they obtain due to cultural differences between themselves and the families they serve. This is the first paper to use a model of statistical discrimination to demonstrate that racial disparities in foster care placements can exist and persist even in the absence of discriminatory decision-makers. I use the National Child Abuse and Neglect Data System (NCANDS) for the years 2004 to 2010 to estimate the correlates of foster care placement by race. The analysis is limited to Texas; Texas is the only state that submits data complete enough to estimate a model containing the key independent variables. Estimating separate regressions by race shows how child, caretaker, economic, and case characteristics influence placement decisions differently for children of different races. Results show black children face the highest probability of placement into foster care and caretaker and economic risk factors have the largest positive effect on the placement of black children. Even when children face the same risk factors and differ only by race, there are still disparities in foster care placements.

# 1.    Introduction

In 2011, black children represented 14% of the U.S. child population, while white children accounted for 53.2% (ChildStats, 2011).[1]  In the same year, 23% of children entering foster care were black, while 44% were white (US DHHS, 2012a).  Moreover, black children exit foster care through family reunification or adoption at a slower rate (Chipungu and Bent-Goodley, 2004; Baccara et al, 2010).  Despite a large literature (most importantly, Lindsey, 1991; Hill, 2001, 2007; Needell et al, 2003; Knott and Donovan, 2010) there is no consensus view on the causes of racial differences in foster care placements.

It is important to understand racial disparities in foster care placement because they may contribute to racial disparities in economic outcomes of the life cycle.  Many studies have found negative effects associated with time spent in foster care.  Jonson-Reid and Barth (2000) and Grogan-Kaylor et al (2008) find that children involved in the child welfare system are more likely to become juvenile offenders.  Jee et al (2006) find increased prevalence of chronic health problems among children who are in foster care for one year.  Paxson and Waldfogel (2002) propose that youth who spend time in the child welfare system are more likely to suffer from substance abuse than those who do not spend time in the system.  Doyle (2007) shows that children on the margin of placement are less likely to experience delinquency and teen motherhood, and have better employment outcomes when they remain at home as opposed to being placed in foster care.  If black children enter foster care at a higher rate and exit at a slower rate than white children, they will disproportionately experience these negative effects.

This is the first paper to use a model of statistical discrimination to demonstrate that racial disparities in foster care placements can exist and persist even in the absence of discriminatory decision-makers.  The decision-maker is a social worker investigating a family suspected of child abuse or neglect.  The social worker must decide whether a child should be placed in foster care.  A child welfare investigation provides limited and noisy information, even more so when the decision maker has a culturally different background than the family they are investigating.  Faced with noisy information, the social worker might use race as a proxy to help supplement their decision-making process.  As in any statistical discrimination framework, the information about a racial group the decision-maker uses need not be accurate.  The social worker is ultimately trying to assess a child's risk of future abuse or neglect.

This paper uses multiple years of the National Child Abuse and Neglect Data System (NCANDS) to estimate the correlates of foster care placement by race. The analysis is limited to Texas; Texas is the only state that submits data complete enough to estimate a model containing the key independent variables.  Estimating separate regressions by race shows how child, caretaker, economic, and case characteristics influence placement decisions differently for children of different races.   This approach provides a much more comprehensive analysis of possible racial disparities than the traditional method of using a race dummy variable.  My results show that black children face the highest probability of placement into foster care and caretaker and economic risk factors have the largest positive effect on the placement of black children.  I use the

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[1] Black non-Hispanic, and white non-Hispanic.

results from the separate regressions by race to calculate predicted probabilities for children of different races who face the same risk factors. Black children facing the same risks as non-black children have a much higher probability of being placed in foster care. Statistical discrimination is a possible explanation for this finding. If investigators believe the average risk of future maltreatment is higher for black children this could lead to more black children being placed in foster care, even when they share the same characteristics as children of other races.


## 2.    Background

In the 1990s, adoption advocates brought evidence to Congress that black children in foster care wait significantly longer to be adopted than white children. In response, Congress passed the Multiethnic Placement Act of 1994 and the Interethnic Adoption Provisions of 1996 (MEPA-IEP). These laws tie federal assistance to states and other entities involved in placement decisions to adherence to guidelines; specifically, states receiving federal funds cannot delay or deny the adoption of a child or the placement of a child in foster care based on race or ethnicity. The law also requires states to develop plans for the recruitment of foster and adoptive parents representative of the racial and ethnic diversity of the children in need of families. The aim of the MEPA-IEP is to decrease the amount of time that children in foster care wait to be adopted, help with the recruitment and retention of foster and adoptive parents, and eliminate discrimination based on race or ethnicity of the child or prospective adoptive parent (Brooks et al, 1999). Hansen and Pollack (2007) find that MEPA-IEP seemed to have a positive, but not long-lasting effect on adoptions of black children from foster care.

Note that the MEPA-IEP guidelines did not cover all areas of child welfare decision-making. A decade after MEPA-IEP were passed, Chipungu and Bent-Goodley (2004) were still calling for the need to eliminate race-based decision-making throughout the child welfare system. As noted above, recent entry and exit statistics indicate the problem still remains. Disparities are documented by numerous studies of California (Needell et al, 2003; Lu et al, 2004) and the nation (Knott and Donovan, 2010; Bhatti-Sinclair and Sutcliffe, 2012). Though disparities may be lessening, Bhatti-Sinclair and Sutcliffe (2012) find a black child in 2009 was still 25% more likely to be removed from his or her home relative to a similar white child.

Researchers in social work assert that racially-biased decision making is likely to take place during child welfare investigations and at other stages in the child welfare system because the class and race of the social worker may differ from the class and race of the client. The core idea is that people from different cultures have a difficult time accurately interpreting information regarding one another. As a result, social workers may practice "stereotype application": they unconsciously and automatically mentally assign the characteristics of a group or class of an individual to the individual himself (van Ryn and Fu, 2004). Moreover, if maltreatment does differ by race then an investigator of any race may make racially-biased decisions (Berger et al, 2006). In the child welfare context, this leads to child welfare investigations where the social worker might not properly understand which services are best for a family because of cultural differences. Differences in education, socioeconomic status, gender, age, or other life

experiences can also create substantial communication and interpretation problems (Korbin, 2002). These researchers assert that racial bias can be eliminated by training social workers to be aware of and sensitive to cultural differences; such awareness and sensitivity is called "cultural competence."

The state of Texas offers cultural competence training to all child protective services (CPS) staff. The cultural competence training was implemented by Senate bill 6 which passed the 79th Texas legislature and became law on September 1, 2005. "Knowing who you are" is a two-day training program the state offers to all CPS staff members during Basic Skills Development; it is owned by Casey Family Programs.[2] The goal of the training is to reduce disproportionality in Texas by providing workers with greater cultural awareness to help reduce cultural biases in removal and permanency decisions (Texas Department of Family and Protective Services (DFPS), 2012). Texas also offers an advanced course in cultural competency entitled "Undoing racism." At the end of the calendar year 2011, more than 5,000 DFPS staff members had received "Knowing you who are" training and approximately 2,700 DFPS staff members had received "Undoing racism" training (Texas DFPS, 2012).[3] The existence of these programs suggests racially-biased decision making is a problem in Texas' child welfare system.

The main objective of becoming culturally competent is to provide child welfare workers with appropriate information regarding other races, ethnicities, and cultures so the stereotype application does not overwhelm their decision making process. In the words of Smith and Devore (2004, p. 443): "Children and families of color cannot and should not be encouraged to meet challenges and solve problems the 'white way'." The next section shows how "stereotype application" is similar to "statistical discrimination."


# 3.    Statistical Discrimination in Child Placement

All applications of the framework of statistical discrimination have a common structure: a decision-maker possesses prior information, observes additional information, and finally, must decide how to allocate a scarce resource. The decision-maker is not assumed to be discriminatory; however, noisy information can lead to persistent, unequal treatment of individuals from different demographic groups. Phelps (1972) was the first to clearly describe how statistical discrimination can arise in labor markets when employers imperfectly observe information about potential employees. Arrow (1973) stressed the importance of the cost of obtaining accurate information. A person's race is low-cost information that a decision maker can use to proxy for more costly information. Aigner and Cain (1977) refined the framework by showing it is not necessary to assume there is an *a priori* actual difference between races or that there is a difference in the accuracy of race as a proxy.

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[2] In May 2011 the training was expanded to all Department of Family and Protective Services (DFPS) programs and is now offered to all DFPS staff in Texas.

[3] In 2011, Texas offered 100 "Knowing who you are" training sessions at an approximate cost of $40,000 per session (Texas DFPS, 2012).

This framework is applicable to any decision-making problem in which information useful to the decision maker is costly to obtain. In health care markets the costly information is "high diagnostic certainty" (Hofer, 2009 p.1950). Balsa and McGuire (2001) and Balsa, McGuire, and Meredith (2005) ask whether doctors act as Bayesians when they make decisions about diagnosing a patient's symptoms. That is, they ask: do doctors update their prior information about group prevalence rates, and do they do this updating differently for different races? They consider the case where an agent gives a noisy signal of useful information, and noisiness differs by race. The more noise in the signal, the less weight the decision-maker places on the information obtained when making a decision. In this case, doctors may place more weight on prior information known about racial or ethnic groups based on statistical averages. The process of inferring diagnosis from a signal plus noise can cause two individuals of different races with identical signals to be treated differently, even by a non-discriminatory decision maker. The more uncertainty a decision-maker faces, the more likely they are to use prior information about group averages when deciding how to allocate a valuable service.[4] The health care decision-making example is easily extended to child welfare decision-making. Social workers are not believed to be discriminatory, but may have a background that is culturally different than the families they work with, leading to decision-making about needed services based off of noisy information. Race may be used as a proxy to help supplement the decision-making process. The literature on stereotype application and cultural competence stresses this process takes place unconsciously and the supplemental information provided by race does not need to be accurate (e.g., van Ryn and Fu, 2004).

More formally and following the logic of Balsa and McGuire (2001), consider two maltreated children, one white and one black, and a white social worker. Assume that a report of maltreatment of each child has been *substantiated*, meaning that maltreatment or risk of maltreatment is supported or founded by State law or State policy (US DHHS, 2012b). For simplicity, following substantiation, suppose the caseworker faces the binary decision of whether or not to place the child in foster care. Assume a continuum of severities ($Z$) is identically distributed in the white and black populations.[5] The continuum of severities is interpreted as the risk of future maltreatment facing the child if left in their home. It is also assumed the white caseworker more accurately interprets the information they obtain while investigating a white family relative to a

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[4] Hofer (2009) questions the validity of the statistical discrimination framework used by Balsa, McGuire, and Meredith (2005). First, Hofer (2009) states that the term "discrimination" is too broad; he is correct. It is important to be clear: statistical discrimination does not refer to a taste for discrimination but refers to cases in which the decision maker is assumed to be non-discriminatory. Second, Hofer (2009) questions the usefulness of a statistical discrimination model when the available information is highly accurate. As described below, for the case of services provided to children in the child welfare system, it is reasonable to believe that available information is not high quality and that there is not a high degree of diagnostic certainty.

[5] Allowing the continuum of severities to differ is how to incorporate the "risk model" following Drake et al (2011).

black family.  It should be emphasized that the *Z* distribution does not need to reflect the true risk of future maltreatment; it represents the social worker's *beliefs* of the risk of future maltreatment.  The social worker's beliefs may not reflect reality.   The caseworker's problem is to choose a threshold of observed severity to compare to the signal of severity they obtain.  A signal above this threshold and the caseworker removes the child from their home; a signal below and they do not.  The caseworker observes a signal (*S*), which reveals the severity of risk the child faces.  The signal is accompanied with noise ($\varepsilon$).

$$S = Z + \varepsilon \qquad\qquad\qquad (1)$$

It is assumed that *Z* is normally distributed with mean $\mu$ and variance $\sigma_Z^2$.  $\varepsilon$ is an error term assumed to be normally distributed with mean 0 and variance $\sigma_\varepsilon^2$ and independently distributed from *S*.  *g(S)* is the distribution of *S* (the sum of two normal distributions) and it is normally distributed with mean $\mu$ and variance $\sigma_Z^2 + \sigma_\varepsilon^2$.

Once the child welfare worker observes *S,* she applies Bayes' rule to update her priors about the likelihood of the child's maltreatment severity.  The updated distribution given the signal *S* is normal with mean $(1 - \beta)\mu + \beta S$ and variance $(1 - \beta)\sigma_Z^2$, where $\beta = \sigma_Z^2 / (\sigma_Z^2 + \sigma_\varepsilon^2)$.  The higher the variance of the noise ($\sigma_\varepsilon^2$), the lower the weight the child welfare worker places on the signal and the higher the weight placed on the population expected severity.  For simplicity, it is assumed that $\varepsilon = 0$ for white children.  Therefore, for white children $\beta = 1$ and the signal perfectly indicates the maltreatment severity.  However, for black children $\beta < 1$ and the white child welfare worker will estimate the severity of maltreatment as a weighted average of the signal and the black population mean.

The mean of the updated distribution shows the source of potential statistical discrimination.  As long as $\beta_{black} < \beta_{white}$, the white caseworker places less weight on the signal obtained from the investigation relative to what they know about the severity of risks facing the children of black families in maltreatment investigations in the population on average.  If the investigation of a black family is noisier for the caseworker than the investigation of a white family, a black child and a white child can be interpreted as facing different severities of risk even if they produce identical signals and their respective racial groups face identical severities on average.

Children derive utility from the consumption of goods, but also from the consumption of a safe living environment.  It is assumed the two utilities are separable, allowing only the safe living environment component to be focused on.  A child with severity *Z* has utility –*aZ* if she is not removed from her home, and has utility –*b* if she is removed from her home, *b* is the "cost" of being placed in foster care.  A child with maltreatment severity *Z* benefits *aZ* – *b* from being place in foster care.  Given the level of *Z*, the caseworker knows the value of removing the child from her home.

The investigator is assumed to be benevolent and decides about removing a child in order to maximize each child's expected benefit from leaving an abusive or neglectful household. The expected benefit the caseworker expects a child with signal *S* to receive is

$$EB(S) = aE(Z \mid S) - b = a[(1 - \beta)\mu + \beta S] - b \qquad\qquad (2)$$

A benevolent child welfare worker seeks to set $S^*$ (the threshold signal) so as to maximize the expected benefit in the population of potentially maltreated children. The optimal $S^*$ is obtained by setting the equation above equal to zero.

$$S^{*opt} = \frac{b - a(1-\beta)\mu}{a\beta} \qquad (3)$$

Therefore, the social worker will remove all black children with a signal $S > S^*$. For white children, since $\beta = 1$, the threshold is set at $Z^* = b/a$ and the social worker will remove white children with $Z \geq Z^*$.

If black children are placed in foster care at a higher rate than similar white children, it must be true that $Z^* > S^*$. The threshold set by the social worker depends on her ability to diagnose the child's maltreatment severity. An increase in the noise of the signal can either increase or decrease the threshold, depending on how the average gross benefit from removing a child from their home $a\mu$ compares with the cost $b$. From equation (3) above, we know that $(\partial S^{*opt}/\partial \beta) = (a\mu - b)/a\beta^2$. When $a\mu > b$, the average child in the population benefits from a service on balance, and the threshold set by the social worker decreases with the noise of the signal. The next section shows that the data are consistent with this story: caseworkers believe that foster care provides a benefit to the average neglected or abused child, so that noisy signals lead to more black children being placed in foster care.

## 4.     Data

The National Child Abuse and Neglect Data System (NCANDS) is one of the few data sets that provide information on child welfare decision-making. The federally-mandated NCANDS data includes a state summary file and a restricted use child-level file. The child file includes information on the demographics of the child and perpetrator, risk factors, investigation dispositions, and services provided (NCANDS, 2010).

The NCANDS data do not cover the nation evenly. While some states submitted child files as early as 1995, the majority of states did not begin submitting child files until 2004. The empirical analysis here uses the years 2004 through 2010 and is restricted to substantiated cases of maltreatment.[6] States only have the legal right to place a child in foster care for a substantiated investigation of abuse or neglect. The unit of analysis is a unique report-child pair. Following previous research using NCANDS (Knott and Donovan, 2010; Bhatti-Sinclair and Sutcliffe, 2012), for families with more than one investigation or with more than one child investigated, a single report-child pair was randomly selected to avoid placing too much weight on families with multiple observations.

There is a substantial amount of missing data in the NCANDS. For example, in 2010 there are 401,354 substantiated cases of child maltreatment. After observations

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[6] Observations where maltreatment resulted in the child's death were excluded from the analysis since there is no placement decision.

with missing variables of interest are dropped, only 79,200 cases remain. Over 35,000 of the complete observations (45%) are from the state of Texas. In fact, Texas dominates the sample of interest from 2004 to 2010. For this reason, the empirical analysis in this paper uses only the 236,102 valid observations from 2004 to 2010 from Texas. Although the results here cannot be generalized to the national level, the focus on Texas removes the cross-state variation in child welfare policies.

The dependent variable is a binary outcome indicating a foster care placement.[7] Figure 1 describes foster care placements in Texas from 2004 to 2010. Across the entire time period, the average percentage of cases resulting in a placement is 14.1%. The proportion of substantiated cases resulting in a foster care placement peaked in 2005 (16.8%), decreased to its minimum in 2009 (11%), and then increased again in 2010.

Figure 1 also shows foster care placements by race. The year-to-year patterns are echoed in the figures for black and white children. But for Hispanic children, there was a continuous decrease in the proportion of placements until 2010, when all races experienced an increase. The data show black children are the most likely to be placed in foster care (17.5%) and white children (15.4%) are more likely to be placed than Hispanic children (11.6%).

Independent variables include child, caretaker, economic, and case characteristics. Besides the child's age, all regressors are binary. Table 1 describes the independent variables for the substantiated cases in which the child was not placed in foster care. The data show that all caretaker risk factors, and the economic risk factors of inadequate housing, and financial problems are the most common in cases involving white children. The descriptive statistics do not indicate risk factors are higher for black children.

Table 2 provides descriptive statistics for only those cases resulting in a foster care placement. When compared to the children in substantiated cases who were not placed, those who were placed in foster care experience a greater proportion of risk factors. Again, it is families with white children who experience the greatest proportion of caretaker risk factors, inadequate housing, and financial problems. If black children experience similar (or less) risks than other children but are placed in foster care at a higher rate, the effects of risk factors must vary across races.

Tables 1 and 2 show black children involved in substantiated cases of maltreatment experience less risk factors than white children, and those black children who are placed in foster care also experience less risk factors than white children. If risk factors are what drive the foster care placement decision, the descriptive analysis suggests black children should not be the most likely to be placed in foster care, but they are. Racially-biased decision-making may be the cause of the racial disparities in foster care placements.


# 5.    Methods

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[7] The NCANDS documentation defines foster care services as "services or activities associated with 24-hour substitute care for all children placed away from their parents or guardians and for whom the State agency has placement and care responsibility" (NCANDS, 2010 p. 30).

I use a binary logit model to estimate the probability of a foster care placement. Using the full sample and a regression model with race dummy variables estimates the affect of race on the placement decision, holding all other regressors constant. The results of this model, whose estimated marginal effects are shown in Table 3, column (1), shows that racial differences exist in foster care placements, and it lends support to the hypothesis that there is statistical discrimination in placement. To capture statistical discrimination in an empirical model, it is necessary to estimate separate regressions using race subsamples of the data. The separate regressions by race allow for a better understanding of what factors are most influential in the foster care placement decision, and whether these influences vary for children of different races.

There is a literature on the potential problems with comparing coefficients from nonlinear models across groups (see Allison, 1999; Williams, 2009; 2010). Heteroskedasticity can create bias in the estimated coefficients from nonlinear models, making group comparisons unreliable. The problem arises due to each estimated coefficient containing its own scaling effect. Heterogeneous choice (also known as location-scale) models have been developed in an attempt to solve this problem. I do not use a heterogeneous choice model in this paper for two reasons. First, without a highly accurate model for the heteroskedasticity, heterogeneous choice models tend to create more biased results than completely ignoring the potential variation in the error term (Keele and Park, 2006). In the words of Keele and Park (2006, p.35): "…the heteroskedastic probit model is too unsound for use in research applications. The estimated sampling variability and coverage rates were less than ideal even under a perfect specification. Measurement error in the variance model induced significant amounts of bias, and almost any specification error causes the estimates of both the choice and variance model to be completely unreliable." Second, while the comparison of estimated coefficients from nonlinear models across groups can be problematic, the comparison of marginal effects is reasonable because the marginal effects implicitly take care of the scaling issue.

# 6.    Results

*6.1 Using the Full Sample with Race Dummy Variables:*

Table 3, column (1) presents the estimated marginal effects from using the full sample of data and race dummy variables. The mean predicted probability of a foster care placement is 14.1% and there are racial differences in the probability of placement. All else equal, the probability of a black child being placed in foster care is 3.1 percentage points higher than for a white child, while the probability is 1.1 percentage points lower for a Hispanic child relative to a white child. As noted above, the approach using race dummy variables does not help identify possible sources of these racial disparities. While the results from the full model do not identify the sources of racial disparities in foster care placement, they do indicate disparities exist even after controlling for a substantial number of risk factors. These racial disparities might be the result of statistical discrimination.

When considering all races, older children are less likely to experience a foster care placement, and females are less likely to be placed in care than males. The magnitudes of these effects are small. A one-year increase in a child's age decreases the probability of placement by 0.2 percentage points, and females face a probability of placement that is only 0.3 percentage points lower than for males.

The estimates show the presence of each child risk factor (i.e. emotional, behavioral, and medical problems) is associated with a decrease in the probability of foster care placement. Previous research[8] using only a single year of the NCANDS and samples that include states besides Texas (but that are dominated by Texas) estimate these variables as having a strong, positive effect on the probability of placement. Using the 2005 NCANDS, Knott and Donovan (2010) estimate odds ratios for the child characteristics of having emotional, behavioral, and medical problems of 2.2, 1.3, and 1.4 respectively. Using the 2009 NCANDS, Bhatti-Sinclair and Sutcliffe (2012) estimate the odds ratios for the same variables of 4.4, 2.1, and 2.3 respectively. The difference between the results here and those from previous studies suggests that child risk factors affect the placement decision in some states differently than they do in Texas.[9] If a child has an emotional, behavioral, or medical problem it is unlikely that placing them in foster care will provide a cure. A very small percentage of children in Texas are reported as suffering from child risk factors. In the full sample, 1.9% of children have behavioral problems, 1.3% have medical problems, and only 0.1% have emotional problems.[10] There are two non-mutually exclusive possible explanations for this finding. Either very few children in Texas involved in substantiated cases of maltreatment suffer from these problems, and/or there are very few children in Texas diagnosed with these problems. With such little variation in these characteristics, estimates should be interpreted with caution.

The signs of the effect of caretaker, economic, and case characteristics are the same as those estimated in previous research; some of the magnitudes are quite different. Most notably, the presence of caretaker drug problems and inadequate housing are estimated as having much larger, positive effects here than in previous empirical work. In Texas, the probability of being placed in foster care is 6.65 percentage points higher for a child whose caretaker suffers from drug problems relative to when the caretaker does not suffer from drug problems. Knott and Donovan (2010) and Bhatti-Sinclair and Sutcliffe (2012) estimate odds ratios for caretaker drug problems of 1.46 and 1.18 respectively, here, when only Texas is considered, the odds ratio is 1.81.

The marginal effect of inadequate housing is the *largest out of all regressors*. All else equal, the probability of a foster care placement for a child in Texas with inadequate housing is 12.2 percentage points higher relative to a child with adequate housing. The

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[8] Specifically, Knott and Donovan (2010) and Bhatti-Sinclair and Sutcliffe (2012). Note that these papers present odds ratios and do not calculate marginal effects.
[9] While both previous studies use samples dominated by Texas, there is substantial variation between the two in the other included states. This might be responsible for some of the differences in the results across the two papers.
[10] In the NCANDS having an emotional problem (i.e. being emotionally disturbed) requires a clinical diagnosis.

estimated odds ratio for this variable is 2.6. In Knott and Donovan (2010) the estimate is 1.9; it is 2.0 in Bhatti-Sinclair and Sutcliffe (2012).

The full model here is very similar to the regression models used by Knott and Donovan (2010) and Bhatti-Sinclair and Sutcliffe (2012), however, the variation across samples makes direct comparison of results difficult. The findings here do suggest decision-makers in Texas are quite sensitive to caretaker drug abuse and inadequate housing when considering foster care placements. In the full regression model these effects are held constant across races (and all other characteristics). The next section presents results from separate regressions by race to examine whether foster care placement risk factors have varying effects across race.

*6.2 Explaining Racial Disparities in Foster Care Placement:*

Table 3, columns (2), (3), and (4) show the estimated marginal effects from the regressions using samples consisting of black, Hispanic, and white children exclusively.[11] [12] These results help identify the potential sources of racial disparities in foster care placements by allowing the effect of each regressor to vary across race. The mean predicted probability of a foster care placement is 0.175 for black children, 0.116 for Hispanic children, and 0.154 for white children. On average, the probability of placement for black children is 2.1 percentage points higher than for white children, and 5.9 percentage points higher than for Hispanic children.

The factors driving the result of black children facing the highest probability of placement are caretaker and economic characteristics. Black children are more likely to be placed in foster care than white or Hispanic children due to caretaker drug abuse, caretaker medical and emotional problems, and from inadequate housing and financial problems. These varying effects suggest that while black children don't experience these risk factors at a higher rate than children of other races, decision-makers associate these characteristics with a greater risk for future maltreatment when investigating cases involving black children compared to children of other races. If the information a caseworker gathers during an investigation of a black child is accompanied with more noise relative to children of other races, the risk threshold for black children will be lower, resulting in more placements of black children, even when characteristics are identical across race.

*6.2a Child Characteristics:*

The estimates show a child having emotional problems is associated with a decrease in the probability of placement for all races; however, this effect is never estimated as statistically significant. In Texas, children with behavioral or medical

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[11] Table 4 shows the estimated coefficients and standard errors from the logistic regressions.
[12] A single regression model using interaction terms between race and every other regressor produces close to identical results.

problems are less likely to be placed in care regardless of race. Hispanic children do not experience as large a negative effect from the presence of these characteristics when compared to black, and white children. The presence of behavioral problems decreases the probability of placement by 11.8, and 10.1 percentage points for black and white children respectively while the estimated effect for Hispanic children is a decrease of 6.7 percentage points. The results are similar with respect to child medical problems. The probability of placement is 10.4, 9.5, and 6.0 percentage points lower for black, white, and Hispanic children respectively. Overall, Hispanic children face the lowest probability of a foster care placement. This is consistent with the findings by Lu et al (2004) and the "Hispanic Paradox" commonly found in the health literature. Despite a tendency to have low socioeconomic status, Hispanic families often have better health outcomes relative to families of other races, perhaps due to cultural and social protective factors (Drake et al, 2011). The estimates show the presence of child risk factors decreases the probability of placement less for Hispanic children than for black or white children. For these findings to be consistent, other characteristics must have a larger, positive effect on foster care placement for white, and black children relative to Hispanic children.

*6.2b Caretaker Characteristics:*

The presence of caretaker risk factors increases the probability of placement across races; alcohol abuse has the smallest affect on placement. When the primary caretaker suffers from alcohol problems, the probability of being placed in foster care increases by 2.0 and 1.3 percentage points for black and Hispanic children respectively; the effect is not statistically significant for white children.

The effects of the remaining caretaker risk factors indicate potential sources for black children facing the highest probability of foster care placement. The effect of caretaker drug abuse, caretaker emotional problems, and caretaker medical problems is the largest for black children.

When the caretaker of a black child suffers from drug problems, the probability of being placed in foster care increases by 8.0 percentage points. The size of the effect is 7.3, and 5.5 for white, and Hispanic children respectively. The racial disparities are even larger for the effects of caretaker emotional, and medical problems. The probability of placement increases by 7.7 percentage points for black children whose caretaker is emotionally disturbed. The effect is 4.2 for white children, and 4.4 for Hispanic children. Medical problems are the most influential caretaker characteristic contributing to the racial disparities in foster care placements in Texas. The size of the effect for black children (10.7 percentage points) is more than double what it is for white (4.9), and Hispanic children (3.8). Medical services may be a more appropriate response to caretaker medical problems as opposed to placing a child in foster care.

*6.3c Economic Characteristics:*

Inadequate housing and financial problems have the largest, positive affect on the probability of foster care placement for black children. These are two more variables contributing to the racial disparities in out of home placements in Texas. For the family of a black child, inadequate housing increases the probability of foster care placement 15.5 percentage points. The size of the effect for families of white, and Hispanic children is 11.9, and 11.5 respectively. For all races, inadequate housing has the largest positive affect on the probability of placement. This result shows that proportionally more black children are placed in foster care due to inadequate housing than white or Hispanic children. The descriptive statistics show black children do not experience inadequate housing at a higher rate than children of other races, however, the effect of inadequate housing is largest for black families. Statistical discrimination is a possible explanation for this finding. Social workers might believe (accurately or not) that black children living in inadequate housing are at a greater risk of future maltreatment than children of other races. This belief will receive more weight in the social worker's placement decision in the presence of noisy information stemming from cultural differences.

The size of the effect of financial problems is smaller than that for inadequate housing, but the racial disparities are even greater. For families of black children, the presence of financial problems is associated with an increase in the probability of a foster care placement of 7.2 percentage points. For families of white, and Hispanic children the effect is 4.9 and 4.8 respectively. Similar to inadequate housing, while the effect of financial problems is greatest for families of black children, these families do not experience financial problems at a higher rate than families of white or Hispanic children.

The estimated effect of receiving public assistance is negative for black children, positive for white, and Hispanic children. Receiving public assistance is the economic characteristic that produces the smallest affect on the probability of foster care placement. Although the magnitudes are small, this is one variable where *the sign* of the effect is different across races. The results suggest decision makers perceive black children to be at less risk of future maltreatment than white children in families receiving public assistance.


*6.3d Case Characteristics:*

For children of all races in Texas, a maltreatment investigation where sexual abuse occurred decreases the probability of a foster care placement; this finding is consistent with previous research (Grogan-Kaylor, 2000; Needell et al, 2003; Bhatti-Sinclair and Sutcliffe, 2012). The underlying reason why sexual abuse decreases the probability of placement is unclear. Black children experience the largest decrease in the probability of placement when sexual abuse occurs (5.0 percentage points), followed by white (2.2) and then Hispanic children (1.6).

As expected, the perpetrator being a prior abuser increases the probability of a foster care placement. The probability increases the most for black children with an estimated effect of 11.7 percentage points. For white, and Hispanic children the effect is 6.9, and 8.1 percentage points respectively. The effect of this risk factor is large and is largest for black children, illustrating another source for racial disparities in foster care placements in Texas.

Finally, the results show a case with an official report source increases the probability of a foster care placement relative to a case reported by an unofficial source. For this variable, the effect is the smallest for black children. The descriptive statistics show the proportion of cases with an official report source is the highest for black children. Since an official report source is more common for black children, decision makers might be less sensitive to this characteristic when considering a foster care placement for a black child.

Results from the regression model that uses the full sample of data and race dummy variables shows racial disparities in foster care placements but cannot identify sources of these disparities. The separate regressions by child's race allow the effect of each regressor to vary across race, and therefore, the results show the characteristics most responsible for the racial differences in foster care placements. Black children experience the highest rate of foster care placement. How decision makers respond to the presence of caretaker drug abuse, caretaker medical problems, inadequate housing, financial problems, and the occurrence of prior abuse are the main contributors to black children facing the highest probability of foster care placement.

*6.4 The Probability of Placement for Children of Different Races Facing the Same Risks:*

The marginal effects in Table 3 are calculated while holding regressors at their mean value. The mean value of regressors is not constant across races. The estimated coefficients from the separate regressions by child's race allow for predicted probabilities to be calculated for children who are identical besides race but whose characteristics produce different effects (i.e. coefficients). Figures 2 and 3 show the probability of foster care placement for children who differ only by race.[13] Regardless of the combination of risks present, black children always face the highest probability of placement. These results emphasize the fact that the racial disparities in placement remain among children facing the same risk factors.

Figure 2 shows in the absence risk factors, black children are more likely to be placed in foster care relative to Hispanic and white children. Caretaker risk factors are associated with the largest racial disparities in placement, followed by economic risk factors.[14] When caretaker risk factors are the only risk factors present, black children face a probability of placement of 0.468, compared to 0.253 and 0.287 for Hispanic and white children, respectively. In the presence of only economic risk factors, black children face a probability of placement of 0.34, compared to 0.247 and 0.304 for Hispanic and white children, respectively.

Figure 3 reinforces these findings by showing the probability of foster care placement in the presence of various combinations of risk factors. As expected, when a

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[13] The predicted probabilities are calculated for 6-year-old males with an official report source in 2010.

[14] Caretaker risk factors include alcohol abuse, drug abuse, medical problems, and emotional problems. Economic risk factors include inadequate housing, financial problems, and receiving public assistance. Case risk factors include the presence of sexual abuse, and a caretaker being a prior abuse.

child faces numerous risk factors the probability of placement increases and the probability is always highest for black children. Caretaker risk factors are responsible for the largest disparities in placement when comparing black children to white, and Hispanic children. Between black and white children, the largest percentage point difference in the probability of placement is when caretaker and case risk factors are present; the probability is 19.3 percentage points higher for black children.[15] The largest difference between black and Hispanic children is when only caretaker risk factors are present; the probability of placement is 21.5 percentage points higher for black children. The largest difference in the probability of placement between white and Hispanic children is when only economic risk factors are present; the probability is 5.9 percentage points higher for white children.

These results cannot prove the existence of statistical discrimination, but statistical discrimination is a possible explanation for why black children who face the same risk factors as children of other races experience much higher probabilities of placement. The next section further describes how statistical discrimination could be responsible for these finding of racial disparities in foster care placements.


*6.5 Statistical Discrimination in Foster Care Placements in Texas:*

This paper's results indicate racial disparities exist in foster care placements in Texas. Caretaker drug abuse, caretaker medical problems, inadequate housing, financial problems, and the occurrence of prior abuse have been identified as the most influential risk factors associated with these disparities. Statistical discrimination is a possible explanation for these findings.

The existence of cultural competence training, and the emphasis placed on its importance, demonstrates that the state of Texas (and many other states) recognizes culturally biased decision-making as a problem in child maltreatment investigations. The primary objective of cultural competence training is to reduce (and to hopefully eliminate) the racial variation in noise accompanying the signal of future maltreatment risk a social worker obtains during an investigation. Assuming social workers are non-discriminatory, the above results combined with the prevalence of cultural competence training provide strong evidence that statistical discrimination exists in foster care placement decisions in Texas.

In connection with the above theoretical model, statistical discrimination can occur strictly due to racial differences in the noise accompanying the signal a social worker obtains during their investigation. Racial differences in the continuum of severities need not be present for racial disparities in foster care placements to occur. As long as there is racial variation in the noise, social workers can make different foster care placement decisions for children who only differ by race. The above model shows more black children will be placed in foster care if their signal is noisier than the signal for an identical white child, and if foster care placement is thought to be beneficial on average for a child involved in a substantiated case of maltreatment. Assuming the continuum of

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[15] When only caretaker risk factors are present, the probability of placement for black children is 18.1 percentage points higher than for white children.

severities is equal across races, the presence of caretaker risk factors seem to be responsible for creating the most variation in the noise associated with the signal a social worker obtains. Again, the existence of cultural competence training provides evidence that there is in fact racial variation in the noise accompanying the signal a social worker receives during a child maltreatment investigation, leading to the plausibility that statistical discrimination is occurring.

If a social worker obtains a signal of future maltreatment risk during an investigation accompanied with equal amounts of noise across races, racial disparities in foster care placements can still occur. There are two possibilities. Either black children on average truly face greater risks than white children, or the social worker *believes* black children face greater risks than white children. The NCANDS data shows the proportion of black children facing various risk factors is similar to (or even less than) the proportion facing children of other races. This finding suggests the social worker's perception of risk varies across race, not actual risk, however, the binary nature of the risk variables does not allow for such a distinction to be made. The data indicates whether a child faces a particular risk or not, there is no measurement of the level of risk. Following the logic of Drake et al (2011), it is possible black children are placed in foster care at a higher rate than children of other races because the risks they face are more severe. The NCANDS data does not allow this possibility to be sufficiently analyzed.

There is also the possibility of a combination of racial variation in the noise associated with the signal a social worker obtains during an investigation, *and* in the social worker's beliefs regarding the severity of the risk of future maltreatment. For example, a white social worker might obtain a noisier signal when investigating a black family relative to a white family. The noisier signal will lead to the social worker placing relatively more weight on their beliefs concerning the risk of future maltreatment for black children on average. The white social worker might also believe, accurately or not, that black children on average face a higher risk of future maltreatment than white children. Racial variation in the noise alone can produce racial disparities in foster care placements. Difference across race in the continuum of expected severities will reinforce these disparities.


# 7.    Concluding Remarks

Using 2004-2010 NCANDS data from Texas, this paper has shown racial disparities are present in foster care placements. Black children are more likely to be placed in foster care when compared to white and Hispanic children. Potential sources for these disparities have been identified. The presence of caretaker drug abuse, caretaker medical problems, inadequate housing, financial problems, and the occurrence of prior abuse increase the probability of placement in foster care and these effects are the strongest for black children. Caretaker risk factors are responsible for creating the largest racial disparities in foster care placement.

This is the first empirical paper to connect the theory of statistical discrimination to the decision to place a child in foster care. By estimating separate regressions by race the results here have shown the effects of numerous characteristics vary substantially across race. This finding suggests children of different races are not being treated

equally, even when they share similar characteristics; this might be due to statistical discrimination. Cohen (2003) describes the child welfare worker as having to "…distinguish between poverty and neglect and evaluate complex family situations, then make decisions quickly based on the best available information. Ultimately, they make decisions on family functioning, parent-child relationships, risks, and child safety based more on their perceptions, attitudes, and judgments than on cultural factors that influence child rearing. (Cohen, 2003, p.149)." Cultural competence training needs continued attention, especially in understanding how problems with addiction and poverty contribute to the "stereotype application."

Given the independent variables of interest, this paper has shown that Texas dominates the samples used in past research, questioning the reliability of previous national estimates. There are policy implications for this finding. Texas seems to do a very good job collecting data on cases of child abuse and neglect. Perhaps other states can learn from Texas' model in order to enhance the quality of available data and to allow for more accurate national estimates. A weakness of this paper is that the results cannot be generalized to locations outside of Texas. Another limitation is that there is no data available to control for caseworker characteristics. At a minimum, knowing the caseworker's race would help to more accurately identify statistical discrimination. The binary nature of the risk factor control variables also makes identifying statistical discrimination difficult. The racial disparities found in this paper could be the result of racial differences in the severity of risk factors a child faces, this cannot be determined using the NCANDS data. This paper's results cannot prove the existence of statistical discrimination in the decision to place a child in foster care. Nonetheless, the prevalence of cultural competence training combined with these estimates of racial disparities in foster care placement are a strong indication that future research needs to continue to address the possibility that statistical discrimination is at work in the foster care placement decision.

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*Tables and Figures:*

**Table 1: Descriptive Statistics of Independent Variables for Children *not* Placed in Foster Care.**

|  | Full Sample<br>N=202,930<br>Mean<br>Std. Dev. | Black<br>N=33,909<br>Mean<br>Std. Dev. | Hispanic<br>N=91,158<br>Mean<br>Std. Dev. | White<br>N=71,562<br>Mean<br>Std. Dev. |
|---|---|---|---|---|
| *Child Characteristics* | | | | |
| Age | 6.31<br>5.05 | 6.16<br>5.10 | 6.33<br>5.01 | 6.43<br>5.07 |
| Female | 0.54<br>0.50 | 0.51<br>0.50 | 0.55<br>0.50 | 0.53<br>0.50 |
| Black | 0.17<br>0.37 | | | |
| Hispanic | 0.45<br>0.50 | | | |
| White | 0.35<br>0.48 | | | |
| Other Race | 0.03<br>0.17 | | | |
| *Child Risk Factors* | | | | |
| Emotionally Disturbed | 0.001<br>0.03 | 0.0004<br>0.02 | 0.0004<br>0.02 | 0.001<br>0.03 |
| Behavioral Problems | 0.02<br>0.14 | 0.03<br>0.16 | 0.02<br>0.14 | 0.02<br>0.14 |
| Medical Problems | 0.01<br>0.12 | 0.02<br>0.13 | 0.01<br>0.12 | 0.01<br>0.12 |
| *Caretaker Risk Factors* | | | | |
| Alcohol Abuse | 0.10<br>0.30 | 0.05<br>0.22 | 0.10<br>0.30 | 0.13<br>0.34 |

*Table 1, Continued*

| | | | | |
|---|---|---|---|---|
| Drug Abuse | 0.26 | 0.23 | 0.24 | 0.30 |
| | 0.44 | 0.42 | 0.43 | 0.46 |
| Emotionally Disturbed | 0.05 | 0.04 | 0.04 | 0.08 |
| | 0.22 | 0.21 | 0.19 | 0.27 |
| Medical Problems | 0.03 | 0.02 | 0.02 | 0.03 |
| | 0.16 | 0.14 | 0.14 | 0.18 |
| *Economic Risk Factors* | | | | |
| Inadequate Housing | 0.13 | 0.09 | 0.11 | 0.17 |
| | 0.34 | 0.29 | 0.32 | 0.38 |
| Financial Problems | 0.12 | 0.11 | 0.12 | 0.14 |
| | 0.33 | 0.31 | 0.32 | 0.35 |
| Public Assistance | 0.30 | 0.30 | 0.34 | 0.26 |
| | 0.46 | 0.46 | 0.47 | 0.44 |
| *Case Characteristics* | | | | |
| Sexual Abuse Occurred | 0.20 | 0.15 | 0.21 | 0.21 |
| | 0.40 | 0.36 | 0.40 | 0.40 |
| Prior Abuse | 0.17 | 0.18 | 0.17 | 0.19 |
| | 0.38 | 0.38 | 0.38 | 0.39 |
| Official Report Source | 0.65 | 0.72 | 0.67 | 0.59 |
| | 0.48 | 0.45 | 0.47 | 0.49 |

Source: National Child Abuse and Neglect Data System, 2004-2010.
Black: black non-Hispanic, White: white non-Hispanic, Hispanic: Hispanic of any race, Other Race: any race besides black non-Hispanic, white non-Hispanic, or Hispanic.
Official report source: social services, medical, mental health, legal law-enforcement or criminal justice, and education.

**Table 2: Descriptive Statistics of Independent Variables for Children Placed in Foster Care.**

|  | Full Sample N=33,172 | Black N=7,188 | Hispanic N=11,960 | White N=13,061 |
|---|---|---|---|---|
|  | Mean Std. Dev. | Mean Std. Dev. | Mean Std. Dev. | Mean Std. Dev. |

*Child Characteristics*

| | Full Sample | Black | Hispanic | White |
|---|---|---|---|---|
| Age | 5.10 | 5.23 | 4.78 | 5.41 |
| | 5.42 | 5.58 | 5.30 | 5.43 |
| Female | 0.50 | 0.48 | 0.52 | 0.50 |
| | 0.50 | 0.50 | 0.50 | 0.50 |
| Black | 0.22 | | | |
| | 0.41 | | | |
| Hispanic | 0.36 | | | |
| | 0.48 | | | |
| White | 0.39 | | | |
| | 0.49 | | | |
| Other Race | 0.03 | | | |
| | 0.17 | | | |

*Child Risk Factors*

| | Full Sample | Black | Hispanic | White |
|---|---|---|---|---|
| Emotionally Disturbed | 0.0003 | 0.0001 | 0.0003 | 0.0004 |
| | 0.02 | 0.01 | 0.02 | 0.02 |
| Behavioral Problems | 0.004 | 0.005 | 0.004 | 0.004 |
| | 0.07 | 0.07 | 0.07 | 0.07 |
| Medical Problems | 0.005 | 0.005 | 0.005 | 0.004 |
| | 0.07 | 0.07 | 0.07 | 0.07 |

*Caretaker Risk Factors*

| | Full Sample | Black | Hispanic | White |
|---|---|---|---|---|
| Alcohol Abuse | 0.16 | 0.10 | 0.17 | 0.18 |
| | 0.36 | 0.29 | 0.37 | 0.38 |
| Drug Abuse | 0.48 | 0.44 | 0.47 | 0.52 |
| | 0.50 | 0.50 | 0.50 | 0.50 |

*Table 2, Continued*

| | | | | |
|---|---|---|---|---|
| Emotionally Disturbed | 0.11 | 0.10 | 0.08 | 0.14 |
| | 0.31 | 0.29 | 0.28 | 0.34 |
| Medical Problems | 0.05 | 0.05 | 0.04 | 0.06 |
| | 0.23 | 0.23 | 0.21 | 0.24 |
| *Economic Risk Factors* | | | | |
| Inadequate Housing | 0.32 | 0.24 | 0.31 | 0.37 |
| | 0.47 | 0.43 | 0.46 | 0.48 |
| Financial Problems | 0.27 | 0.25 | 0.27 | 0.29 |
| | 0.45 | 0.43 | 0.44 | 0.45 |
| Public Assistance | 0.43 | 0.41 | 0.47 | 0.40 |
| | 0.50 | 0.49 | 0.50 | 0.49 |
| *Case Characteristics* | | | | |
| Sexual Abuse Occurred | 0.11 | 0.08 | 0.11 | 0.13 |
| | 0.31 | 0.27 | 0.32 | 0.34 |
| Prior Abuse | 0.36 | 0.38 | 0.37 | 0.33 |
| | 0.48 | 0.48 | 0.48 | 0.47 |
| Official Report Source | 0.68 | 0.72 | 0.71 | 0.65 |
| | 0.46 | 0.45 | 0.45 | 0.48 |

Source: National Child Abuse and Neglect Data System, 2004-2010.
Black: black non-Hispanic, White: white non-Hispanic, Hispanic: Hispanic of any race, Other Race: any race besides black non-Hispanic, white non-Hispanic, or Hispanic.
Official report source: social services, medical, mental health, legal law-enforcement or criminal justice, and education.

**Table 3: Logit Marginal Effects on Probability of Foster Care Placement.**

| | Full Sample (1) | Black (2) | Hispanic (3) | White (4) |
|---|---|---|---|---|
| *Child Characteristics* | | | | |
| Age | -0.003*** (0.0001) | -0.001*** (0.0004) | -0.003*** (0.0002) | -0.002*** (0.0003) |
| Female | -0.003*** (0.001) | -0.008*** (0.004) | 0.001*** (0.002) | -0.006*** (0.002) |
| Black | 0.036*** (0.002) | | | |
| Hispanic | -0.019*** (0.002) | | | |
| Other Race | -0.0002 (0.005) | | | |
| *Child Risk Factors* | | | | |
| Emotionally Disturbed | -0.069* (0.039) | -0.098 (0.134) | -0.042 (0.057) | -0.085 (0.056) |
| Behavioral Problems | -0.088*** (0.009) | -0.118*** (0.023) | -0.067*** (0.013) | -0.101*** (0.016) |
| Medical Problems | -0.080*** (0.009) | -0.104*** (0.022) | -0.060*** (0.013) | -0.095*** (0.017) |
| *Caretaker Risk Factors* | | | | |
| Alcohol Abuse | 0.010*** (0.002) | 0.020*** (0.007) | 0.014*** (0.003) | 0.002 (0.003) |
| Drug Abuse | 0.067*** (0.002) | 0.080*** (0.004) | 0.055*** (0.002) | 0.073*** (0.003) |
| Emotionally Disturbed | 0.047*** (0.002) | 0.076*** (0.007) | 0.044*** (0.004) | 0.042*** (0.004) |
| Medical Problems | 0.054*** (0.003) | 0.107*** (0.009) | 0.038*** (0.005) | 0.049*** (0.005) |

*Table 3, Continued*

*Economic Risk Factors*

| | | | | |
|---|---|---|---|---|
| Inadequate Housing | 0.122*** | 0.155*** | 0.115*** | 0.118*** |
| | (0.002) | (0.005) | (0.002) | (0.003) |
| Financial Problems | 0.053*** | 0.072*** | 0.048*** | 0.049*** |
| | (0.002) | (0.005) | (0.003) | (0.003) |
| Public Assistance | 0.007*** | -0.009*** | 0.004** | 0.020*** |
| | (0.002) | (0.004) | (0.002) | (0.003) |

*Case Characteristics*

| | | | | |
|---|---|---|---|---|
| Sexual Abuse Occurred | -0.016*** | -0.050*** | -0.016*** | -0.022*** |
| | (0.002) | (0.007) | (0.003) | (0.004) |
| Prior Abuse | 0.084*** | 0.117*** | 0.081*** | 0.070*** |
| | (0.002) | (0.004) | (0.002) | (0.003) |
| Official Report Source | 0.032*** | 0.019*** | 0.031*** | 0.040*** |
| | (0.002) | (0.004) | (0.002) | (0.003) |

**Sample Information and Model Diagnostics**

| | | | | |
|---|---|---|---|---|
| Number of Obs. | 236,102 | 41,097 | 103,118 | 84,623 |
| Condition Index | 11.20 | 10.92 | 11.50 | 13.04 |
| Pseudo-$R^2$ | 0.105 | 0.102 | 0.111 | 0.090 |
| Mean Predicted Prob. | 0.141 | 0.175 | 0.116 | 0.154 |
| % Correctly Predicted | 86.07 | 82.78 | 88.43 | 84.69 |
| % True Correct | 53.74 | 54.36 | 51.22 | 54.72 |
| % False Correct | 86.58 | 83.68 | 88.83 | 85.09 |

Source: National Child Abuse and Neglect Data System, 2004-2010. *p<0.10, **p<0.05, ***p<0.01. The dependent variable is an indicator for a foster care placement. Parentheses contain robust standard errors. Marginal effects are calculated at the mean of the independent variables. The omitted race category is white children.

**Table 4: Logit Estimated Coefficients.**

|  | Full Sample (1) | Black (2) | Hispanic (3) | White (4) |
|---|---|---|---|---|
| *Child Characteristics* | | | | |
| Age | -0.024*** (0.001) | -0.010*** (0.003) | -0.040*** (0.002) | -0.016*** (0.002) |
| Female | -0.035*** (0.013) | -0.062*** (0.028) | 0.015*** (0.021) | -0.055*** (0.020) |
| Black | 0.309*** (0.017) | | | |
| Hispanic | -0.200*** (0.015) | | | |
| Other Race | -0.003 (0.038) | | | |
| *Child Risk Factors* | | | | |
| Emotionally Disturbed | -1.010*** (0.351) | -1.183 (1.042) | -0.665 (0.621) | -1.143** (0.468) |
| Behavioral Problems | -1.482*** (0.086) | -1.617*** (0.178) | -1.330*** (0.144) | -1.539*** (0.137) |
| Medical Problems | -1.252*** (0.084) | -1.282*** (0.171) | -1.112*** (0.136) | -1.382*** (0.142) |
| *Caretaker Risk Factors* | | | | |
| Alcohol Abuse | 0.093*** (0.019) | 0.150*** (0.053) | 0.159*** (0.030) | 0.021 (0.028) |
| Drug Abuse | 0.596*** (0.014) | 0.577*** (0.031) | 0.589*** (0.023) | 0.599*** (0.022) |
| Emotionally Disturbed | 0.402*** (0.022) | 0.517*** (0.053) | 0.451*** (0.041) | 0.334*** (0.031) |
| Medical Problems | 0.450*** (0.031) | 0.684*** (0.071) | 0.396*** (0.055) | 0.382*** (0.044) |

*Table 4, Continued*

*Economic Risk Factors*

| | | | | |
|---|---|---|---|---|
| Inadequate Housing | 0.943*** | 0.964*** | 1.024*** | 0.867*** |
| | (0.014) | (0.036) | (0.024) | (0.022) |
| | | | | |
| Financial Problems | 0.459*** | 0.504*** | 0.497*** | 0.390*** |
| | (0.016) | (0.038) | (0.027) | (0.026) |
| | | | | |
| Public Assistance | 0.068*** | -0.074** | 0.045** | 0.169*** |
| | (0.014) | (0.031) | (0.023) | (0.023) |

*Case Characteristics*

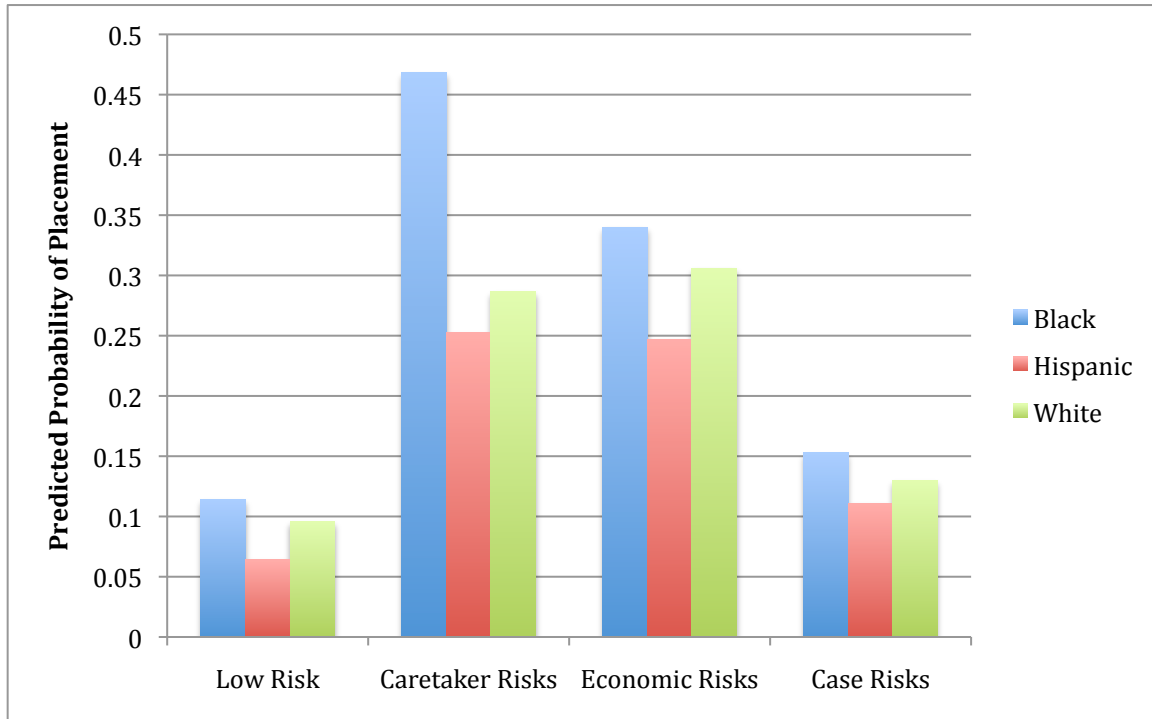| | | | | |
|---|---|---|---|---|
| Sexual Abuse Occurred | -0.251*** | -0.446*** | -0.201*** | -0.199*** |
| | (0.020) | (0.050) | (0.034) | (0.030) |
| | | | | |
| Prior Abuse | 0.702*** | 0.793*** | 0.796*** | 0.543*** |
| | (0.014) | (0.030) | (0.023) | (0.022) |
| | | | | |
| Official Report Source | 0.333*** | 0.152*** | 0.395*** | 0.364*** |
| | (0.014) | (0.031) | (0.023) | (0.021) |

Source: National Child Abuse and Neglect Data System, 2004-2010. *p<0.10, **p<0.05, ***p<0.01. The dependent variable is an indicator for a foster care placement. Parentheses contain robust standard errors. The omitted race category is white children.

**Figure 1**: Percent of substantiated cases in which the child was placed in foster care. Texas 2004-2010.
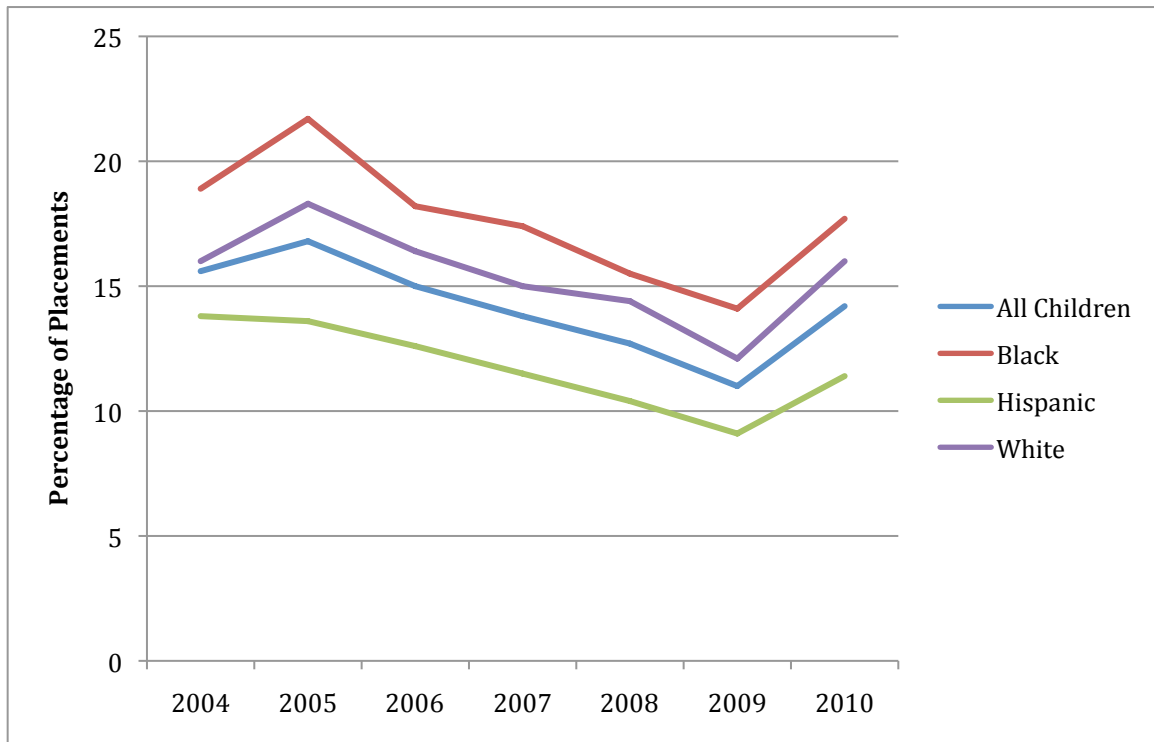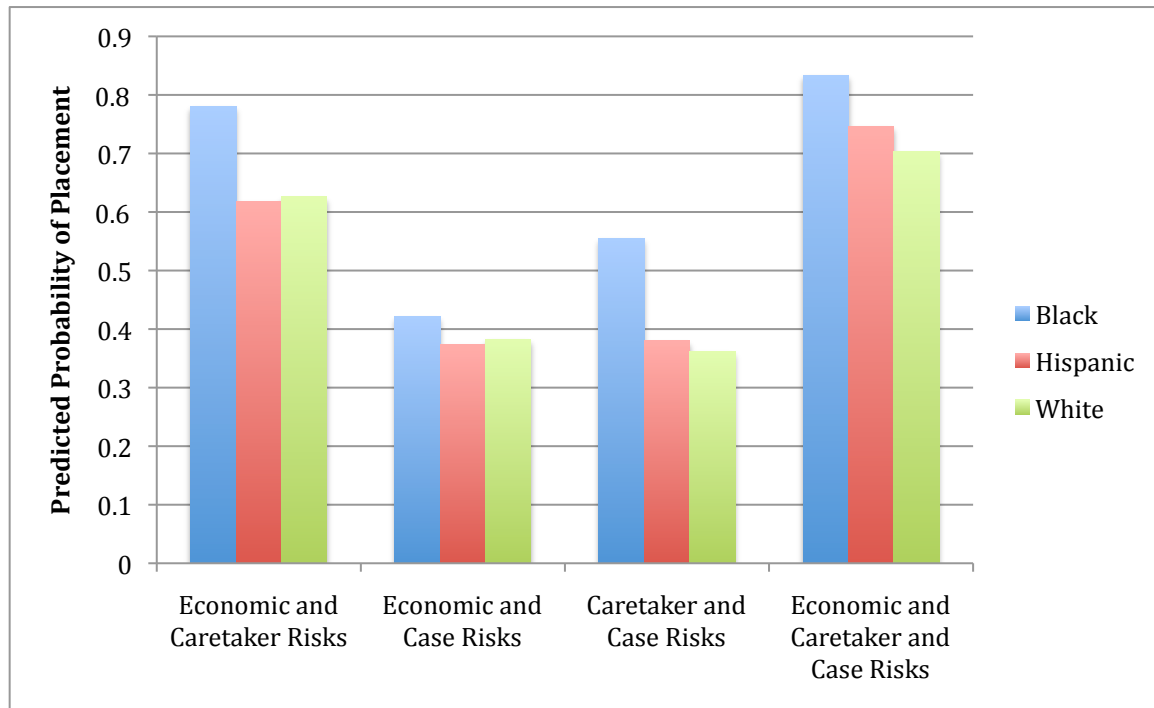


Source: National Child Abuse and Neglect Data System, 2004-2010.

**Figure 2**: Predicted probability of foster care placement across race for children facing the same risk factors. Texas 2004 – 2010.



Source: National Child Abuse and Neglect Data System, 2004-2010. Low risk = 6 year old male with a substantiated investigation in 2010 where maltreated was reported from an official source. Caretaker risks = Low risk + the caretaker suffers from alcohol abuse, drug abuse, and medical problems. Economic risks = Low risk + the family suffers from inadequate housing, financial problems, and receives public assistance. Case Risks = Low risk + sexual abuse occurred, and the primary caretaker is a prior abuser.

**Figure 3**: Predicted probability of foster care placement across race for children facing the same risk factors. Texas 2004 – 2010.



Source: National Child Abuse and Neglect Data System, 2004-2010. Low risk = 6 year old male with a substantiated investigation in 2010 where maltreated was reported from an official source. Caretaker risks = Low risk + the caretaker suffers from alcohol abuse, drug abuse, and medical problems. Economic risks = Low risk + the family suffers from inadequate housing, financial problems, and receives public assistance. Case Risks = Low risk + sexual abuse occurred, and the primary caretaker is a prior abuser.